

Claims

1.  
A computer-implemented method for representing IMS messages as XML documents, the method comprising:

generating an XML document template from an IMS message definition; and  
merging an IMS message with the generated template to produce a  
corresponding XML document.

2. The method of claim 1, wherein the generating step comprises:  
obtaining an IMS message definition;  
obtaining a DTD for representing arbitrary IMS message definitions;  
compiling the IMS message definition with an option configured to produce  
an associated data (Adata) file; and  
parsing the Adata file using the DTD to generate an XML document  
template corresponding to the IMS message definition.

3. The method of claim 2, wherein the generating step comprises:  
obtaining an IMS message definition;  
obtaining a DTD for representing arbitrary IMS message definitions; and  
parsing the IMS message definition using the DTD to generate an XML  
document template corresponding to the IMS message definition.

1           4.     The method of claim 2, wherein the Adata file comprises at least one  
2     IMS message definition in a relatively language independent format compared with  
3     program source code.

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5           5.     The method of claim 2, wherein obtaining the IMS message definition  
6     comprises:

7                 extracting the IMS message definition from one of an application source code  
8                 file and a copy file.

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10          6.     The method of claim 2, wherein the step of obtaining the DTD  
11     comprises:

12                creating a UML object model for representing arbitrary IMS message  
13                definitions; and

14                processing the object model using an XMI utility to generate the DTD.

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16          7.     The method of claim 2, wherein the merging step comprises:  
17     identifying a placeholder within the XML document template for receiving  
18     a corresponding value from the IMS message;

19     reading the value from the IMS message; and

20     inserting the value into a location within the XML document template  
21     indicated by the placeholder.

1           8.     The method of claim 7, wherein the placeholder comprises an XML  
2 tag.

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4           9.     The method of claim 7, wherein the identifying step comprises:  
5 checking the placeholder for an associated tag indicating that a  
6 corresponding value exists within the IMS message.

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8           10.    The method of claim 7, wherein at least one placeholder has an  
9 associated tag indicating the size of the corresponding value within the IMS  
10 message, the reading step comprising:

11           reading a portion of the IMS message corresponding to the indicated size.

12  
13           ~~11.~~   A system for representing IMS messages as XML documents, the  
14 system comprising:

15           a template generation module configured to generate an XML document  
16           template from an IMS message definition; and  
17           a merging module configured to merge an IMS message with the generated  
18           template to produce a corresponding XML document.

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20           12.    The system of claim 11, wherein the template generating module  
21 comprises:

1 a compiler configured to compile an IMS message definition with an option  
2 configured to produce an associated data (Adata) file; and  
3 a parser configured to parse the Adata file using a DTD for representing  
4 arbitrary IMS message definitions to generate an XML document  
5 template corresponding to the IMS message definition.

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7 13. The system of claim 12, wherein the template generating module  
8 comprises:

9 a parser configured to obtain a DTD for representing arbitrary IMS message  
10 definitions and parse the IMS message definition using the DTD to  
11 generate an XML document template corresponding to the IMS  
12 message definition.

13  
14 14. The system of claim 12, wherein the Adata file comprises at least one  
15 IMS message definition in a relatively language independent format compared with  
16 program source code.

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18 15. The system of claim 12, further comprising:  
19 a message definition extractor configured to extract the IMS message  
20 definition from one of an application source code file and a copy file.

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1       16.    The system of claim 12, further comprising:  
2           a modeling tool configured to create a UML object model for representing  
3           arbitrary IMS message definitions; and  
4           an XMI utility for generating the DTD from the UML object model.  
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6       17.    The system of claim 12, wherein the merging module is further  
7 configured to identify a placeholder within XML document template for receiving  
8 a corresponding value from the IMS message; read the value from the IMS message;  
9 and insert the value into a location within the XML document template indicated  
10 by the placeholder.  
11

12       18.    The system of claim 17, wherein the placeholder comprises an XML  
13 tag.  
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15       19.    The system of claim 17, wherein at least one placeholder comprises an  
16 associated tag indicating whether a corresponding value exists within the IMS  
17 message.  
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19       20.    The system of claim 7, wherein at least one placeholder has an  
20 associated tag indicating the size of the corresponding value within the IMS  
21 message.

1       21. An article of manufacture comprising a program storage medium  
2 readable by a processor and embodying one or more instructions executable by the  
3 processor to perform a computer-implemented method for representing IMS  
4 messages as XML documents, the method comprising:

5           generating an XML document template from an IMS message definition; and  
6           merging an IMS message with the generated template to produce a  
7           corresponding XML document.

8  
9       22. The article of claim 21, wherein the generating step comprises:  
10           obtaining an IMS message definition;  
11           obtaining a DTD for representing arbitrary IMS message definitions;  
12           compiling the IMS message definition with an option configured to produce  
13           an associated data (Adata) file; and  
14           parsing the Adata file using the DTD to generate an XML document  
15           template corresponding to the IMS message definition.

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17       23. The article of claim 22, wherein the IMS message definition comprises  
18 program source code in a language selected from the group consisting of COBOL,  
19 PL/I, Assembler, and Pascal.  
20  
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1           24.    The article of claim 22, wherein the Adata file comprises at least one  
2    IMS message definition in a relatively language independent format compared with  
3    program source code.

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5           25.    The article of claim 22, wherein obtaining the IMS message definition  
6    comprises:

7           extracting the IMS message definition from one of an application source code  
8           file and a copy file.

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10          26.    The article of claim 22, wherein the step of obtaining the DTD  
11    comprises:

12          creating a UML object model for representing arbitrary IMS message  
13          definitions; and  
14          processing the object model using an XMI utility to generate the DTD.

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16          27.    The article of claim 22, wherein the merging step comprises:  
17          identifying a placeholder within XML document template for receiving a  
18          corresponding value from the IMS message;  
19          reading the value from the IMS message; and  
20          inserting the value into a location within the XML document template  
21          indicated by the placeholder.

1           28.    The article of claim 27, wherein the placeholder comprises an XML tag.

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3           29.    The article of claim 27, wherein the identifying step comprises:  
4           checking the placeholder for an associated tag indicating that a  
5           corresponding value exists within the IMS message.

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7           30.    The article of claim 27, wherein at least one placeholder has an  
8           associated tag indicating the size of the corresponding value within the IMS  
9           message, the reading step comprising:  
10          reading a portion of the IMS message corresponding to the indicated size.